Lessons Learned in Landfill Greenhouse Gas Reduction Projects

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Presentation Outline

- Introduction
- Protocols
- Project development process
  - Steps
  - Evidence required
  - Lessons learned

GHG Credits from LFG

- Anyone may be able to generate GHG emissions reduction credits
  - Exact requirements depend on scheme used
  - Must not already be required to control LFG
- Buyers/Markets want assurance that the credits are “real”
  - Verification process

Offset Project Protocols

- Voluntary Carbon Standard 2007
- ISO 14064 - 2
- CDM Methodologies
- Chicago Climate Exchange
- Environmental Resources Trust
- GE – AES
- California Climate Action Registry
- USEPA Climate Leaders

Steps for Project Documentation

- Select protocol
- Gather evidence
- Calculate reductions
- Develop project report
- Complete verification

Selecting the Protocol

- What is the intended market?
- What protocol best fits the project?

- Lessons learned
  - Don’t assume things
  - Do your research

Gather Evidence

- Types of Data
  - LFG gas flow measurements
  - Methane content readings
  - Electricity generation
  - Electricity consumption of project
  - Calibrations
- Incorporate process into existing systems where possible

Gather Evidence - 2

- Lessons Learned
  - Must be evidence trail for all statements and calculations
    - Additionality statements need evidence in line with the protocol requirements
    - Ensure all parameters are included
      - Flow, Methane content, Destruction efficiency
    - Monitoring frequency may be different than what is needed for operations

Gather Evidence - 3

- More Lessons Learned
  - Maintain records of meter calibrations
    - Also record adjustments if appropriate
  - Note downtime or errors
  - Track assumptions
  - Make it as clear as possible for the verifiers

Calculate Reductions

- Specific formula to be used is dependent on the protocol

- Lessons Learned
  - Use the correct formula and constants
  - Alternative site specific constants acceptable in some cases (destruction efficiency)
  - Quality control process is important

Develop Project Report

- PDD or other form based on protocol

- Lessons Learned
  - Include all necessary information
  - Include discussion of all assumptions, data sources, calculation methodology
  - The more information you include, the easier it is to verify

Complete verification

- Select verifier approved for market or protocol chosen

- Lessons Learned
  - Compile all of the information ahead of time
  - Leave enough time to complete the process (especially for first verifications)
  - Consider multiple verifications

Overall Lessons Learned

- Be familiar with the protocol
- Ask questions
  - Other landfills
  - Verifiers
  - End users
- The opportunities are real

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